In the Claims:

Please cancel claims 1-12, 14-16, and 23, amend claims 18, 19 and 22, and add claims 24-30. This listing of claims will replace all prior versions and listings of claims in the application:

1.-16 (Canceled)

17. (Previously Presented) A spring end plug comprising:

a plug;

a thread described on said plug;

a spring

said plug adapted to be mounted onto the spring with said thread adapted to be screwed on to the spring; and

a mechanism that is adapted to allow a load to be applied through the plug;

wherein a counter force applied by the spring in response to the load is adjustable by repositioning the plug along the spring.

18. (Currently Amended) The spring end plug of claim 17 wherein said plug has a flat side adapted to be located away from [[a]] the spring and said mechanism is located in a center of said flat side.

19. (Currently Amended) The spring end plug of claim 17 which can be used to adjust ~~the~~ a spring constant of [[a]] the spring by rotating the end plug relative to [[a]] the spring.

20. (Original) The spring end plug of claim 17 having a cylindrical wall with said thread mounted on one of an inside of said cylindrical wall and an outside of said cylindrical wall.

21. (Canceled)

22. (Currently Amended) A mechanism ~~that can maintain a constant force~~ to adjustably apply a counter-balance force in response to a load comprising:

a spring;

a pulley including an input groove and an output groove;

an input cable having a first end coupled to the input groove and a second end connected with [[a]] the spring;

an output cable having a first end coupled to the output groove[[;]] and a second end extending from the first end;

wherein the pulley is adapted to transfer a ~~constant~~ counter-balance force to the second end of the output cable; and

~~wherein the input groove and the output groove are shaped according to a characteristic of the spring;~~

an adjustable end plug connected between the input cable and the spring;

wherein the adjustable end plug includes a helical groove within which a coil of the spring is receivable; and

wherein the adjustable end plug can be threaded along the coil of the spring to adjust the counter-balance force applied by the spring in response to the load.

23. (Canceled)

24. (New) A mechanism to adjustably apply a counter-balance force in response to a load comprising:

a spring having a plurality of coils;

an end plug screwed onto one or more of the coils so that the one or more coils is received in a helical groove of the end plug, wherein a spring constant of the spring is adjustable by selectively advancing or retreating the end plug along the coils of the spring;

a dual pulley rotatable at a shaft, the dual pulley including:

an input groove formed in a first surface; and

an output groove formed in a second surface;

wherein one or both of the first surface and the second surface has a radius that spirals outwardly from the shaft;

an output cable connected with the output groove; and

an input cable connected between the input groove and the end plug;

wherein the spring applies a counter-balance force to the input cable, which counter-balance force is transmitted to the output cable by the dual pulley.

25. (New) The mechanical mechanism of claim 24, wherein:

the dual pulley further comprises an input pulley fixedly connected to an output pulley by a spline hub; and

the input pulley includes the input groove and the output pulley includes the output groove.

26. (New) The mechanism of claim 24, wherein:

both of said first surface and said second surface have a radius that spirals outwardly from the shaft; and

said first surface spirals outwardly in a direction that is opposite to a direction that said second surface spirals outwardly.

27. (New) The mechanism of claim 24, wherein:

the dual pulley is a dual helical pulley having an input groove that spirals outwardly in a counter-clockwise manner and an output groove that spirals outwardly in a clockwise manner;

28. (New) The mechanical mechanism of claim 24 wherein the radius of one or both of the first surface and second surface is defined by a torque profile.

29. (New) The mechanical mechanism of claim 28 wherein the torque profile is parabolic.

30. (New) A spring end plug for a spring comprising:

a plug;

a thread described on said plug;

said plug adapted to be mounted onto the spring with said thread adapted to be screwed on to the spring; and

a mechanism that is adapted to allow a load to be applied through the plug;

wherein a counter force applied by the spring in response to the load is adjustable by repositioning the plug along the spring.